

IN Kumagai, Katsuo, Miyagi-ken, JAPAN  
Kai, Kenzo, Miyagi-ken, JAPAN  
Komine, Ken-ichi, Miyagi-ken, JAPAN  
PI US 2002115622 A1 20020822  
AI US 2001-995040 A1 20011126 (9)  
PRAI JP 2000-358055 20001124  
JP 2001-46565 20010222  
DT Utility  
FS APPLICATION  
LREP JOHN S. PRATT, ESQ, KILPATRICK STOCKTON, LLP, 1100 PEACHTREE STREET,  
SUITE 2800, ATLANTA, GA, 30309  
CLMN Number of Claims: 10  
ECL Exemplary Claim: 1  
DRWN No Drawings  
LN.CNT 617

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides a therapeutic agent and therapeutic method for treatment of **mastitis** in livestock comprising **glycyrrhizin** and pharmaceutically acceptable salts thereof as effective ingredients.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 8 OF 11 USPATFULL on STN  
AN 2001:51574 USPATFULL  
TI Process for preparing an anti-viral medicinal product from plant extracts  
IN Hwang, Shie-Ming, 4886 Chevy Chase Ave., Columbus, OH, United States 43220  
PI US 6214350 B1 20010410  
AI US 1999-376701 19990817 (9)  
RLI Division of Ser. No. US 1997-890065, filed on 9 Jul 1997, now patented, Pat. No. US 5989556  
PRAI US 1996-16100P 19960710 (60)  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Tate, Christopher R.  
LREP Standley & Gilcrest LLP  
CLMN Number of Claims: 4  
ECL Exemplary Claim: 1  
DRWN 34 Drawing Figure(s); 29 Drawing Page(s)  
LN.CNT 3439  
AB This invention relates to compositions derived from Chinese herbal medicines, medicinal plants and extracts thereof, and to their use for the treatment of animals infected with viruses, especially with hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency virus (HIV). More specifically, the compositions of the present invention are derived from various Chinese herbal medicines or medicinal plants which have a long history of human consumption. The compositions of the invention are obtained through specific techniques and have demonstrated outstanding efficacy for treating human HBV carriers and hepatitis C patients. Compositions according to the invention have also exhibited in vitro antiviral activities against murine leukemia virus (MuLV) and HIV. HIV is the virus known to cause acquired immunodeficiency syndrome (AIDS) in humans and AIDS presents special problems to the medical community which the present invention addresses.

L2 ANSWER 9 OF 11 USPATFULL on STN  
AN 1999:150659 USPATFULL  
TI Compositions of matter useful in the treatment of viral infections derived from plant extracts  
IN Tsai, Hsiu-Hsien, Chang-Huah, Taiwan, Province of China

Hwang, Shie-Ming, Columbus, OH, United States  
 PA Sage R&D, Columbus, OH, United States (U.S. corporation)  
 PI US 5989556 19991123  
 AI US 1997-890065 19970709 (8)  
 PRAI US 1996-16100P 19960710 (60)  
 DT Utility  
 FS Granted  
 EXNAM Primary Examiner: Naff, David M.; Assistant Examiner: Kerr, Janet M.  
 LREP Nickey, Donald O. Standley & Gilcrest, LLP  
 CLMN Number of Claims: 4  
 ECL Exemplary Claim: 1  
 DRWN No Drawings  
 LN.CNT 3305  
 AB Compositions derived from Chinese herbal medicines, medicinal plants and extracts thereof, are provided for the treatment of animals infected with viruses, especially with hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency virus (HIV). More specifically, the compositions of the present invention are derived from various Chinese herbal medicines or medicinal plants which have a long history of human consumption. The compositions of the invention are obtained through specific techniques and have demonstrated outstanding efficacy for treating human HBV carriers and hepatitis C patients. Compositions according to the invention have also exhibited in vitro antiviral activities against murine leukemia virus (MuLV) and HIV. HIV is the virus known to cause acquired immunodeficiency syndrome (AIDS) in humans and AIDS presents special problems to the medical community which the present invention addresses. Preferred compositions contain the herbal ingredients AEGINETIAE HERBA, BLECHNI RHIZOMA, LESPEDEZAE HERBA, POLYGONI CUSPIDATI RHIZOMA, FORSYTHIAE FRUCTUS, and LIGUSTRI FRUCTUS, or contain the herbal ingredients AEGINETIAE HERBA, LONICERAE FLOS, PRUNELLAE SPICA, and LESPEDEZAE HERBA.

L2 ANSWER 10 OF 11 USPATFULL ON STN

AN 1998:143667 USPATFULL  
 TI Use of plant extracts for treatment of HIV, HCV and HBV infections  
 IN Tsai, Hsiu-Hsien, Chang-Huah, Taiwan, Province of China  
 Hwang, Shie-Ming, Columbus, OH, United States  
 Kung, Pai-Chu, Chang-Huah, Taiwan, Province of China  
 PA Sage R&D, Columbus, OH, United States (U.S. corporation)  
 PI US 5837257 19981117  
 AI US 1997-863803 19970527 (8)  
 PRAI US 1996-16100P 19960710 (60)  
 DT Utility  
 FS Granted  
 EXNAM Primary Examiner: Naff, David M.; Assistant Examiner: Kerr, Janet M.  
 LREP Nickey, Donald O. Standley & Gilcrest  
 CLMN Number of Claims: 13  
 ECL Exemplary Claim: 1  
 DRWN No Drawings  
 LN.CNT 2073  
 AB This invention relates to compositions derived from Chinese herbal medicines, medicinal plants and extracts thereof, and to their use for the treatment of animals infected with viruses, especially with hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency virus (HIV). More specifically, the compositions of the present invention are derived from various Chinese herbal medicines or medicinal plants which have a long history of human consumption. The compositions of the invention are obtained through specific techniques and have demonstrated outstanding efficacy for treating human HBV carriers and hepatitis C patients. Compositions according to the invention have also exhibited in vitro antiviral activities against murine leukemia virus (MuLV) and HIV. HIV is the virus known to cause acquired immunodeficiency syndrome (AIDS) in humans and AIDS presents

special problems to the medical community which the present invention addresses.

L2 ANSWER 11 OF 11 WPINDEX COPYRIGHT 2004 THOMSON DERWENT on STN  
AN 2001-620278 [72] WPINDEX  
DNC C2001-185689  
TI Agent for treating **mastitis** of lactating livestock such as  
cattle, bovine, horse, goat, pig or rabbit, comprises **glycyrrhizin**  
or its salt.  
DC B03 C02  
IN KAI, K; KOMINE, K; KUMAGAI, K  
PA (KYOR-N) KYORITSU SEIYAKU CORP; (TCEL-N) T-CELL RES INST; (TISE-N) TISERU  
KENYUSHO KK; (KAIK-I) KAI K; (KOMI-I) KOMINE K; (KUMA-I) KUMAGAI K  
CYC 29  
PI JP 2001206849 A 20010731 (200172)\* 8p  
EP 1208844 A1 20020529 (200243) EN  
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT  
RO SE SI TR  
CA 2363990 A1 20020524 (200247) EN  
US 2002115622 A1 20020822 (200258)  
JP 3435405 B2 20030811 (200354) 8p  
ADT JP 2001206849 A JP 2001-46565 20010222; EP 1208844 A1 EP 2001-127408  
20011123; CA 2363990 A1 CA 2001-2363990 20011123; US 2002115622 A1 US  
2001-995040 20011126; JP 3435405 B2 JP 2001-46565 20010222  
FDT JP 3435405 B2 Previous Publ. JP 2001206849  
PRAI JP 2000-358055 20001124  
AN 2001-620278 [72] WPINDEX  
AB JP2001206849 A UPAB: 20011206

NOVELTY - Agent for treating **mastitis** of livestock, comprises  
**glycyrrhizin** or its salt, as active ingredient.  
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for  
treatment of **mastitis** of livestock, which comprises  
administering **glycyrrhizin** or its salts, into the breast of the  
livestock.

ACTIVITY - Antiinflammatory.

7 Frisian lactating cattle with onset **mastitis**, were  
treated with **glycyrrhizin** therapeutic agent (400-800 mg/fringe),  
by injecting the agent into the breast of the cattle. The cattles were  
evaluated on the 0th, 1st, 2nd, 7th, 14th and 21st day. The evaluation  
showed that there was no expansion and in duration of the breast after the  
7th day. The solidified substance in the milk (lump) showed no lump after  
the 2nd day.

The aggregation degree of the milk measured by California  
**Mastitis** Test (CMT), showed no aggregation after the 7th day and  
when a paddle was leaned the raw milk flowed smoothly. Judgment by pH in  
the milk (evaluated by The clinical pathological study essential points  
(Ministry of Agriculture, Forestry, and Fishery Economic Affairs Bureau  
edition) Heisei 9 amendment version in livestock mutual aid) showed a gold  
color or yellow color from the 1st day. The number of somatic cells in the  
milk (SCC) was decreased from 416 SCC multiply 104 cells/ml in the 0th day  
to 0.3 SCC multiply 104 cells/ml in the 21st day. Further, the number of  
milk granulocyte (PMN) was decreased from 359 PMN multiply 104 cells/ml in  
the 0th day to 0 PMN multiply 104 cells/ml in the 21st day.

Thus, the results obtained showed that the CMT measured value and the  
number of somatic cells which where the **mastitis** diagnostic  
marker, have improved quickly after **glycyrrhizin** administration.  
Further, 2 days after administration the clinical symptoms were almost  
disappeared, and after 4 days the recovery of the cattle was high and was  
fit to be transported for commercial use.

MECHANISM OF ACTION - None given.

USE - For treating **mastitis** of lactating livestock such as  
cattle (claimed), bovine, horse, goat, pig or rabbit.

ADVANTAGE - The therapeutic agent effectively treats **mastitis**

of livestock, especially lactating livestock. The glycyrrhizin or its salt utilized also as food additive, is safe to humans, and is efficiently utilized for bovine mastitis treatment.  
Dwg.0/0

=> dis hist

(FILE 'HOME' ENTERED AT 10:37:18 ON 18 MAR 2004)

FILE 'APOLLIT, BABS, CAPLUS, CBNB, CEN, CIN, DISSABS, EMA, IFIPAT, JICST-EPLUS, PASCAL, PLASNEWS, PROMT, RAPRA, SCISEARCH, TEXTILETECH, USPATFULL, USPAT2, WPINDEX, WTEXTILES' ENTERED AT 10:37:30 ON 18 MAR 2004

L1 5320 S GLYCYRRHIZIN  
L2 11 S L1 AND MASTITIS

L Number	Hits	Search Text	DB	Time stamp
1	236	514/33	USPAT; US-PGPUB; EPO; DERWENT	2004/03/18 10:26
2	19	514/33 and glycyrrhizin	USPAT; US-PGPUB; EPO; DERWENT	2004/03/18 10:27
3	1	(514/33 and glycyrrhizin) and mastitis	USPAT; US-PGPUB; EPO; DERWENT	2004/03/18 10:27
4	1818	glycyrrhizin	USPAT; US-PGPUB; EPO; DERWENT	2004/03/18 10:27
5	7	glycyrrhizin and mastitis	USPAT; US-PGPUB; EPO; DERWENT	2004/03/18 10:27

L Number	Hits	Search Text	DB	Time stamp
1	1818	glycyrrhizin	USPAT; US-PGPUB; EPO; DERWENT	2004/03/18 10:47
2	632	glycyrrhizin and antioxidant\$	USPAT; US-PGPUB; EPO; DERWENT	2004/03/18 10:50
3	613	(glycyrrhizin and antioxidant\$) and composition	USPAT; US-PGPUB; EPO; DERWENT	2004/03/18 10:54
4	1498	glycyrrhizin and composition	USPAT; US-PGPUB; EPO; DERWENT	2004/03/18 10:55
6	245	((glycyrrhizin and composition) and buffer) and stabilizer	USPAT; US-PGPUB; EPO; DERWENT	2004/03/18 11:44
5	494	(glycyrrhizin and composition) and buffer	USPAT; US-PGPUB; EPO; DERWENT	2004/03/18 10:59

L Number	Hits	Search Text	DB	Time stamp
1	197	glycyrrhizinic	USPAT; US-PGPUB; EPO; DERWENT	2004/03/18 13:41
2	1	glycyrrhizinic and mastitis	USPAT; US-PGPUB; EPO; DERWENT	2004/03/18 13:41
3	154	glycyrrhizinic and composition	USPAT; US-PGPUB; EPO; DERWENT	2004/03/18 13:41

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NEWS	4	DEC 08	INPADOC: Legal Status data reloaded
NEWS	5	SEP 29	DISSABS now available on STN
NEWS	6	OCT 10	PCTFULL: Two new display fields added
NEWS	7	OCT 21	BIOSIS file reloaded and enhanced
NEWS	8	OCT 28	BIOSIS file segment of TOXCENTER reloaded and enhanced
NEWS	9	NOV 24	MSDS-COHS file reloaded
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NEWS	11	DEC 08	IMS file names changed
NEWS	12	DEC 09	Experimental property data collected by CAS now available in REGISTRY
NEWS	13	DEC 09	STN Entry Date available for display in REGISTRY and CA/Caplus
NEWS	14	DEC 17	DGENE: Two new display fields added
NEWS	15	DEC 18	BIOTECHNO no longer updated
NEWS	16	DEC 19	CROPU no longer updated; subscriber discount no longer available
NEWS	17	DEC 22	Additional INPI reactions and pre-1907 documents added to CAS databases
NEWS	18	DEC 22	IFIPAT/IFIUDB/IFICDB reloaded with new data and search fields
NEWS	19	DEC 22	ABI-INFORM now available on STN
NEWS	20	JAN 27	Source of Registration (SR) information in REGISTRY updated and searchable
NEWS	21	JAN 27	A new search aid, the Company Name Thesaurus, available in CA/Caplus
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NEWS	23	MAR 03	MEDLINE and LMEEDLINE reloaded
NEWS	24	MAR 03	MEDLINE file segment of TOXCENTER reloaded
NEWS	25	MAR 03	FRANCEPAT now available on STN
NEWS EXPRESS			MARCH 5 CURRENT WINDOWS VERSION IS V7.00A, CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP), AND CURRENT DISCOVER FILE IS DATED 3 MARCH 2004
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ENTRY	SESSION
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=> s glycyrrhizin  
L1 5320 GLYCYRRHIZIN

=> s l1 and mastitis  
L2 11 L1 AND MASTITIS

=> dis l2 1-11 bib abs

L2 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 2003:839438 CAPLUS

TI Anti-inflammatory effects of intramammary infusions of  
glycyrrhizin in lactating cows with mastitis caused by  
coagulase-negative staphylococci

AU Kai, Kenzo; Komine, Ken-ichi; Asai, Ken-ichi; Kuroishi, Toshinobu; Komine,  
Yumiko; Kozutsumi, Tomoyuki; Itagaki, Masashi; Ohta, Minoru; Endo, Yasuo;  
Kumagai, Katsuo

CS T-Cell Research Institute, Minami-yoshinari Aoba-ku, Sendai, 989-3204,  
Japan

SO American Journal of Veterinary Research (2003), 64(10), 1213-1220  
CODEN: AJVRAH; ISSN: 0002-9645

PB American Veterinary Medical Association  
DT Journal

LA English

AB Objective-To determine the anti-inflammatory effects of glycyrrhizin  
(GL) in lactating cows with mastitis attributable to naturally  
occurring infection with coagulase-neg. staphylococci (CNS). Animals-12  
lactating Holstein cows with mastitis attributable to infection  
with CNS and 2 healthy cows without mastitis. Procedure-Clin.  
signs, number of bacteria in milk, somatic cell count (SCC) in milk, concns.  
of  $\alpha$ -lactalbumin and lactoferrin in milk; and concentration of histamine in  
milk were investigated before and after inflammatory infusion of GL (6  
cows) or antimicrobials (6 cows). Glands of 2 healthy cows were infused  
with staphylococcal enterotoxin; milk leukocytes were then harvested and  
incubated with various doses of GL. Results-In cows infected with CNS  
that had a low bacterial concentration in milk, infusion of GL alone resulted

in significant improvements in swelling, firmness of glands, and number of clots  
in milk, and it decreased the SCC, but not significantly. Percentage of  
neutrophils decreased significantly (to < 30%) by 2 days after infusion.  
Use of lactoferrin as a marker of inflammation in mammary glands revealed  
a decrease in concns., whereas use of  $\alpha$ -lactalbumin as a marker of  
recovery for mammary glands revealed significant increases in concns. in  
the GL-infused group. Accompanying these anti-inflammatory effects, a  
decrease in the concentration of histamine in milk was observed in the  
GL-infused group. Glycyrrhizin decreased histamine production by milk

leukocytes in a concentration-dependent manner. Conclusions and Clin. Relevance-Infusion of GL may regulate inflammatory inflammation through modulation of inflammatory mediators such as histamine.

RE.CNT 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2004 ACS ON STN

AN 2003:700999 CAPLUS

DN 140:108938

TI Mammalian's breast and development of anti-mastitis therapeutics

AU Kumagai, Katsuo; Komine, Ken-ichi; Kai, Kenzo

CS T-cell Research Institute, Co., Ltd., Japan

SO Kagaku Ryoho no Ryoiki (2003), 19(7), 1165-1171

CODEN: KRRYEI; ISSN: 0913-2384

PB Iyaku Janarusha

DT Journal; General Review

LA Japanese

AB A review. Female humans and cattle are both mammals and carry the mammary glands in the bodies. Both animals, when mature and pregnant, synthesize milk in the organs which they produce after the delivery of offspring, through the mammary gland. We are interested in the immune system during the secretory cycles exhibited in the mammary gland of both animals. We collected milk by cannulation from the breast cavity and stained the cells found in the milk containing a variety of lymphocyte populations with immunofluorescence. We finally analyzed those populations in the mammary glands of both species, and discussed particularly the similarities and differences found in their immunol. functions detected in the both species. In addition, we have found an antiinflammatory and non-toxic drug during selectively working in the secretory phase of Holstein cows (glycyrrhizin) from a variety of antiinflammatory drugs. We have also found an antiinflammatory drug effective for the drying phase of the mammary glands of Holstein cows and with antibacterial effect (lactoferrin). Using both drugs, we have examined their anti-mastitis effects for mastitis induced by bacterial infection with a successful result.

L2 ANSWER 3 OF 11 IFIPAT COPYRIGHT 2004 IFI ON STN

AN 10171930 IFIPAT;IFIUDB;IFICDB

TI THERAPEUTIC AGENT FOR MASTITIS OF LIVESTOCK AND METHOD FOR

TREATING MASTITIS USING THE SAME AGENT; TREATING LIVESTOCK

USING GLYCYRRHIZIN OR PHARMACEUTICALLY ACCEPTABLE SALTS THEREOF

AS EFFECTIVE INGREDIENTS; TREATMENT DURING LACTATION PERIODS; NONTOXIC TO HUMANS IN MILK

INF Kai; Kenzo, Miyagi-ken, JP

Komine; Ken-ichi, Miyagi-ken, JP

Kumagai; Katsuo, Miyagi-ken, JP

IN Kai Kenzo (JP); Komine Ken-ichi (JP); Kumagai Katsuo (JP)

PAF Unassigned

PA Unassigned Or Assigned To Individual (68000)

AG JOHN S. PRATT, ESQ KILPATRICK STOCKTON, LLP, 1100 PEACHTREE STREET, SUITE

2800 ATLANTA, GA, 30309, US

PI US 2002115622 A1 20020822

AI US 2001-995040 20011126

PRAI JP 2000-358055 20001124

JP 2001-46565 20010222

FI US 2002115622 20020822

DT Utility; Patent Application - First Publication

FS CHEMICAL

APPLICATION

CLMN 10

AB The present invention provides a therapeutic agent and therapeutic method for treatment of mastitis in livestock comprising glycyrrhizin and pharmaceutically acceptable salts thereof as effective ingredients.

- L2 ANSWER 4 OF 11 JICST-EPlus COPYRIGHT 2004 JST on STN  
 AN 1030475055 JICST-EPlus  
 TI Mammalian's breast and development of anti-mastitis therapeutics  
 AU KUMAGAI KATSUO; KAI KENZO  
 KOMINE KEN'ICHI  
 CS Tiseru Kenkyusho  
 Tiseru Kenkyusho  
 SO Kagaku Ryocho no Ryoiki (Antibiotics & Chemotherapy), (2003) vol. 19, no. 7, pp. 1165-1171. Journal Code: F0768B (Fig. 6, Ref. 24)  
 CODEN: KRRYEI; ISSN: 0913-2384  
 CY Japan  
 DT Journal; Short Communication  
 LA Japanese  
 STA New  
 AB Female human and cow both phenogenetically belonging to the mammalian species carry the mammary glands in the bodies. Both animals, when matured and pregnant, synthesize the milk in the organs and produce them after the delivery of a child, through the breast. We are interested in the immune systems during the secretory cycles exited in the mammary gland of both animals. We collected the milk by the cannulation from the breast cavity and stained the cells found in the milk containing a variety of lymphocyte populations with immunofluorescence. We finally analyzed those populations in the mammary glands of both species, and discussed particularly with the similarity and difference found in their immunological functions detected in the both species. In addition, we have found an anti-inflammatory and non-toxic drug during selectively working in the secretory phase of the Holstein cows (glycyrrhizin) from a variety of anti-inflammatory drugs. We have also found an anti-inflammatory drug effective for the drying phase of the mammary glands of the Holstein cows and with anti-bacterial effect (lactoferrin). Using both drugs, we have now been examining their anti-mastitis effects for the mastitis induced by bacterial infection with a successful result. (author abst.)
- L2 ANSWER 5 OF 11 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN  
 AN 2003:849754 SCISEARCH  
 GA The Genuine Article (R) Number: 7252M  
 TI Anti-inflammatory effects of intramammary infusions of glycyrrhizin in lactating cows with mastitis caused by coagulase-negative staphylococci  
 AU Kai K (Reprint); Komine K; Asai K; Kuroishi T; Komine Y; Kozutsumi T; Itagaki M; Ohta M; Endo Y; Kumagai K  
 CS T Cell Res Inst, Aoba Ku, Bldg ICR 6-6-3, Sendai, Miyagi 9893204, Japan (Reprint); T Cell Res Inst, Aoba Ku, Sendai, Miyagi 9893204, Japan; Miyagi Prefectural Anim Ind Expt Stn, Iwadeyama, Miyagi 9896445, Japan; Yamagata Prefecture Federat Agr Mutual Aid Assoc, Yamagata 9902171, Japan; Tohoku Univ, Dept Anim Sci, Fac Agr, Aoba Ku, Sendai, Miyagi 9890914, Japan; Tohoku Univ, Dept Pharmacol, Sch Dent, Aoba Ku, Sendai, Miyagi 9808575, Japan  
 CYA Japan  
 SO AMERICAN JOURNAL OF VETERINARY RESEARCH, (OCT 2003) Vol. 64, No. 10, pp. 1213-1220.  
 Publisher: AMER VETERINARY MEDICAL ASSOC, 1931 N MEACHAM RD SUITE 100, SCHAUMBURG, IL 60173-4360 USA.  
 ISSN: 0002-9645.  
 DT Article; Journal  
 LA English  
 REC Reference Count: 43  
 \*ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS\*  
 AB Objective: To determine the anti-inflammatory effects of glycyrrhizin (GL) in lactating cows with mastitis attributable to naturally occurring infection with coagulase-negative

staphylococci (CNS).

Animals-12 lactating Holstein cows with mastitis attributable to infection with CNS and 2 healthy cows without mastitis.

Procedure-Clinical signs, number of bacteria in milk, somatic cell count (SCC) in milk, concentrations of alpha-lactalbumin and lactoferrin in milk, and concentration of histamine in milk were investigated before and after intramammary infusion of GL (6 cows) or antimicrobials (6 cows). Glands of 2 healthy cows were infused with staphylococcal enterotoxin; milk leukocytes were then harvested and incubated with various doses of GL.

Results-in cows infected with CNS that had a low bacterial concentration in milk, infusion of GL alone resulted in significant improvements in swelling, firmness of glands, and number of clots in milk, and it decreased the SCC, but not significantly. Percentage of neutrophils decreased significantly (to < 30%) by 2 days after infusion. Use of lactoferrin as a marker of inflammation in mammary glands revealed a decrease in concentrations, whereas use of alpha-lactalbumin as a marker of recovery for mammary glands revealed significant increases in concentrations in the GL-infused group. Accompanying these anti-inflammatory effects, a decrease in the concentration of histamine in milk was observed in the GL-infused group. Glycyrrhizin decreased histamine production by milk leukocytes in a concentration-dependent manner.

Conclusions and Clinical Relevance-Infusion of GL may regulate intramammary inflammation through modulation of inflammatory mediators such as histamine.

L2 ANSWER 6 OF 11 USPATFULL on STN  
AN 2003:153777 USPATFULL  
TI Breast pad assembly containing a skin benefit ingredient  
IN Lange, Beth Anne, Appleton, WI, UNITED STATES  
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PA Kimberly-Clark Worldwide, Inc. (U.S. corporation)  
PI US 2003105445 A1 20030605  
AI US 2001-998500 A1 20011130 (9)  
DT Utility  
FS APPLICATION  
LREP SENNIGER POWERS LEAVITT AND ROEDEL, ONE METROPOLITAN SQUARE, 16TH FLOOR,  
ST LOUIS, MO, 63102  
CLMN Number of Claims: 71  
ECL Exemplary Claim: 1  
DRWN No Drawings  
LN.CNT 1173

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A breast pad assembly is disclosed wherein one face of the breast pad which faces the breast during use contains a composition comprising a skin benefit ingredient for improving the skin health of a woman's breast and nipple skin. In one embodiment of the invention, the skin health benefit ingredient comprises omega-3 fatty acids which can replace lipids lost from the breast and nipple during breast feeding. The omega-3 fatty acids can also be ingested by the infant to improve systemic development in the infant. In another embodiment, the skin benefit ingredient comprises omega-3 fatty acids and essential fatty acids.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 7 OF 11 USPATFULL on STN  
AN 2002:214234 USPATFULL  
TI Therapeutic agent for mastitis of livestock and method for treating mastitis using the same agent